Manitoba

Fire Loss Report 1989

Labour

Office of the
Fire Commissioner

91-03950/

Table of Contents

TITLE	PAGE
Specific Objectives of the Office of the Fire Commissioner	5
Review of 1989	5
Section I	
Fire Loss Statistics	
Chart 1 Comparative Chart of the Total Number of Fires in Manitoba, 1985 - 1989	7
Chart 2 Comparative Chart of the Total Dollar Loss in Manitoba, 1985 - 1989	8
Table 1 Fire Losses by Amount of Dollar Loss, 1989	9
Table 2 Fire Losses by Month, 1989	9
Table 3 Fire Losses by Day of Week, 1989	10
Table 4 Fire Losses by Time of Day, 1989	10
Table 5 Fatal Fires, 1980 - 1989	11
Table 6 Fire Fatalities by Property Classification, 1989	11
Table 7 Fire Casualties by Age and Sex, 1989	12
Table 8 Fire Casualties by Act or Omission, 1989	12
Table 9 Fire Losses by Major Property Classification, 1989	13
Table 10 Breakdown of Area of Origin by Property Classification, 1989	16
Table 11 Breakdown of Act or Omission by Property Classification, 1989	19
Table 12 Breakdown of Source of Heat of Ignition by Property Classification, 1989	22
Table 13 Breakdown of Fuel or Energy by Property Classificaiton, 1989	25
Table 14 Breakdown of Material First Ignited by Property Classification, 1989	28
Table 15 Breakdown of Fires by Community or Area, 1989	31
Table 16 Fire Losses Exceeding $500,000., 1989	37
Section II	
Investigations	
Table 17 Investigations Conducted Under The Fires Prevention Act, 1989	38
Table 18 Findings of Investigations Conducted Under The Fires Prevention Act, 1989	38
Section III	
Manitoba Fire Chiefs	
Manitoba Fire Chiefs List	39

Office of the Fire Commissioner

The Office of the Fire Commissioner, through The Fires Prevention Act and The Buildings and Mobile Homes Act is dedicated to promote and encourage public safety of persons and property and to reduce life and property loss in respect to fires, dangerous goods, structural and mechanical matters and other related hazards.

Specific objectives are:

- Investigate fires to determine origin and cause

- Provide training services to fire fighters, building officials and emergency service personnel on topics such as fire prevention and protection practices, handling of dangerous goods, rescue techniques and building safety

- Promote fire prevention through public education

- Consult with fire departments and other agencies to evaluate and recommend fire protection equipment

- Inspect buildings to ensure they meet the requirements of the Fire and Building Codes

- Review building plans and advise building officials on the requirements of the Manitoba Building Code

- Compile information concerning fire loss statistics and the activities of the fire service

Review of 1989

Manitoba recorded a total of 5,762 fires which resulted in $55.6 million in property damage. Twenty-two persons lost their lives and 256 were injured in these fires.

These figures are encouraging when compared to the previous years statistics. This represents a decrease of 18% or 1,267 fires and a 9% or 5.5 million reduction in property loss. Outdoor property depicts the most drastic reduction in fires, 960 or 32% over 1988, followed by a 9% decrease in structural fires over the same period.

Thirteen men, three women and six children died in 20 fires. Although this represents a 27% reduction in comparison to the 30 reported in 1988, it is very disheartening to report even one fire death. Eighteen of the 22 fatalities occurred in residential occupanices.

One and two family dwellings accounted for 1,396 fires representing 24% of all fires in the province resulting in a loss of $19.4 million. A further 377 or 7% of fires were in apartment buildings with a loss of $3.3 million. These two residential categories accounted for 16 deaths, 167 injuries, 31 percent of all fires and 41% of the total dollar loss in the province.

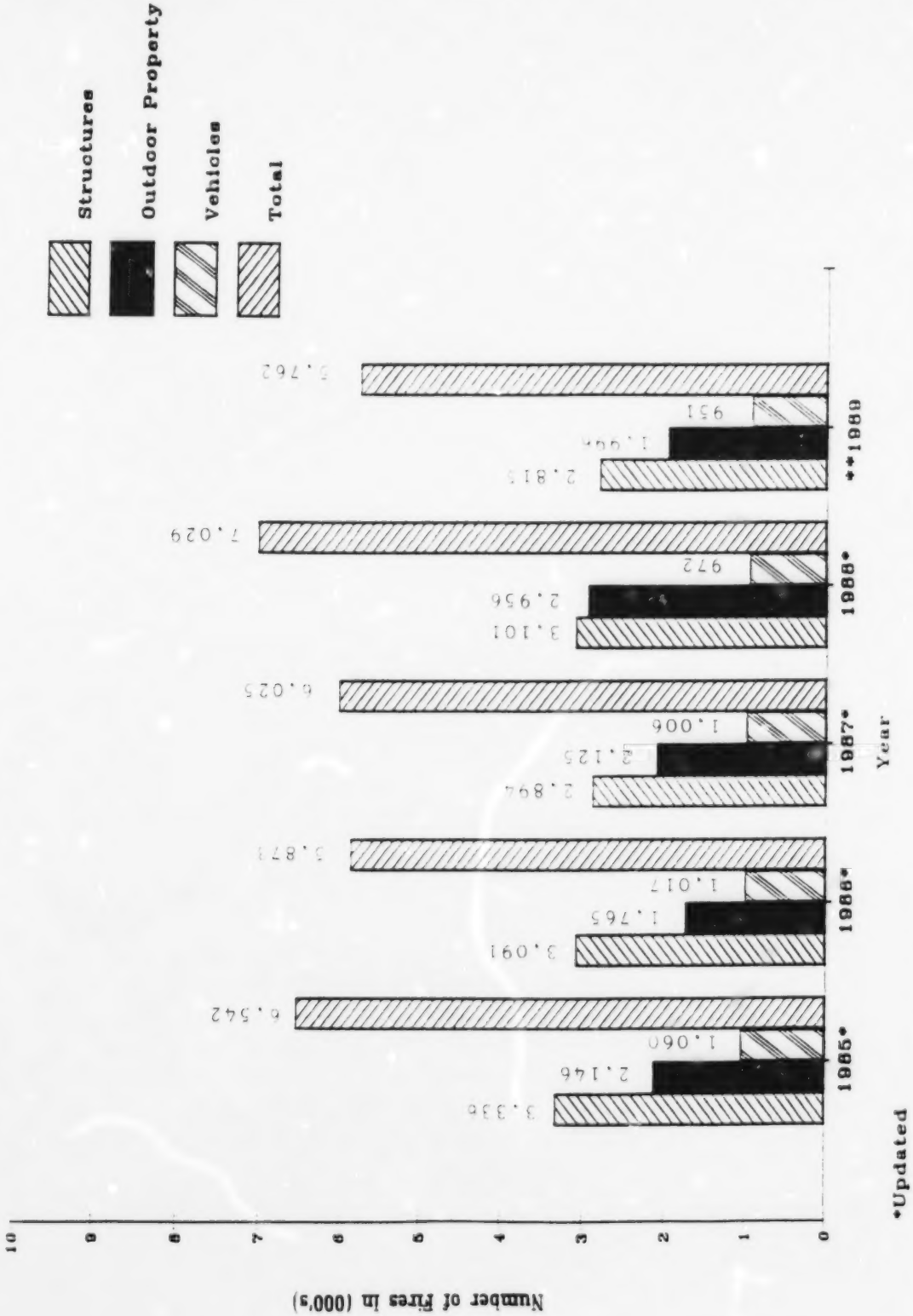
There were 11 fires which exceeded $500,000 in property damage. Although they accounted for .19% of all fires, they were responsible for approximately $10.1 million loss or 19% of the province's annual dollar loss. Four of these fires were a result of arson or suspected arson and caused a $4.8 million loss.

The investigation section in conjunction with local police authorities conducted 389 fire investigations during 1989. Police throughout

the province carried out an additional 519, bringing the total to 908. There were 398 investigations in the city of Winnipeg, 69 in urban centres and 441 in rural Manitoba. The 440 accidental fires represented 49% of the total number of investigations conducted, with incendiary vandalism and undetermined suspicious accounting for 252 or 28%; followed by undetermined accidental at 212 or 23 percent.

The Fire Commissioners' Office takes this opportunity to express our sincere thanks to the various agencies and organizations who support and assist us in carrying out our responsibilities. We look forward to continuing the excellent working relationship with the fire and police services as well as the members of the insurance agencies.

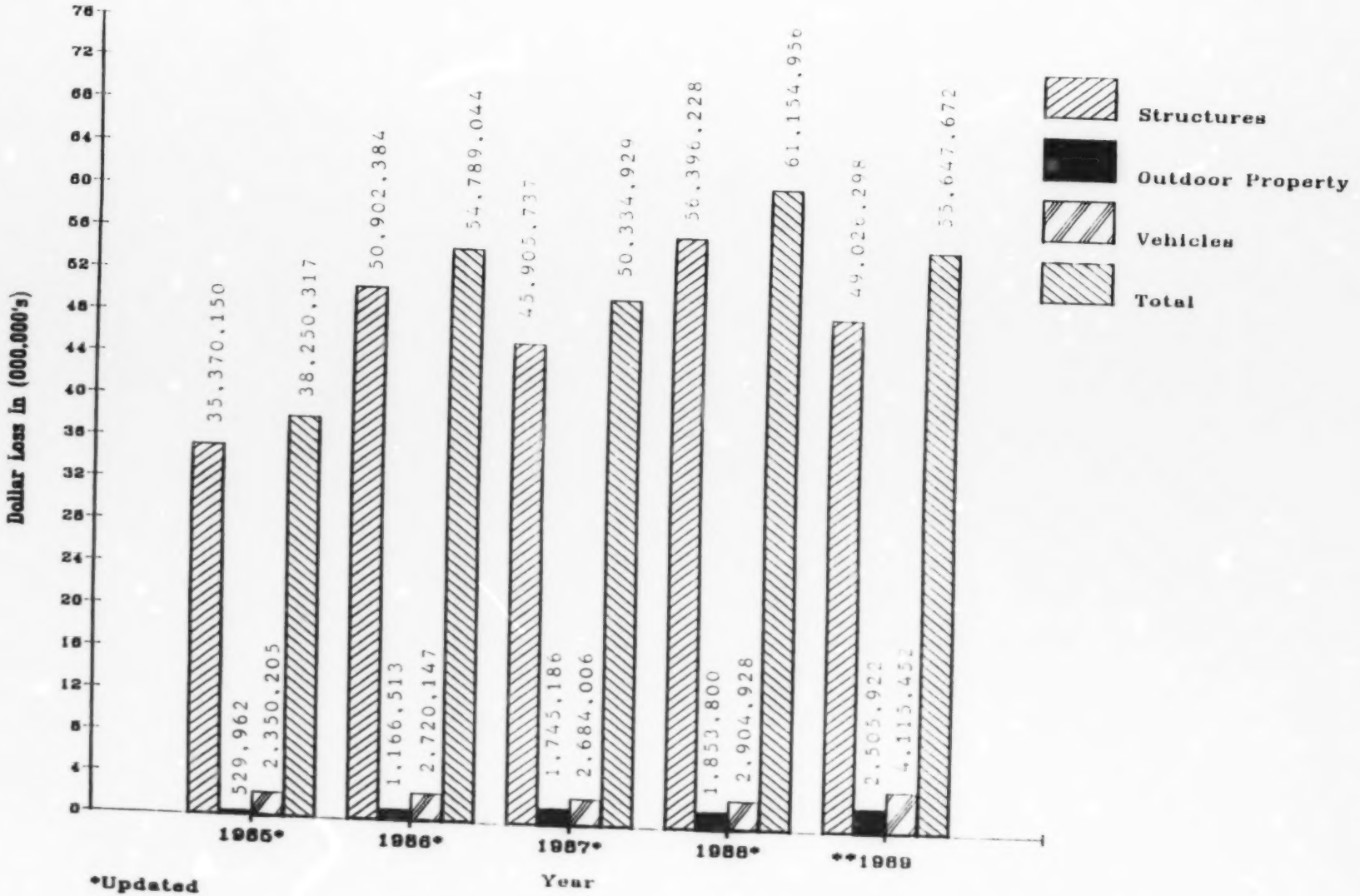
Chart No. 1
Comparative Chart of the Total Number of Fires in Manitoba, 1985 - 1989



*Updated
**Preliminary Fire Loss

Chart No. 2

Comparative Chart of the Total Dollar Loss in Manitoba, 1985 - 1989



*Updated

**Preliminary Fire Loss

Table No. 1

Fire Losses by Amount of Dollar Loss, 1989

Amount of Dollar Loss Minimum	Maximum	Number of Fires	Percent	Amount	Percent
Less than	100.00	2,355	40.87%	$ 7,824	.01%
100.00 to	999.99	1,341	23.27	448,977	.81
1,000.00 to	9,999.99	1,270	22.05	3,948,956	7.10
10,000.00 to	49,999.99	528	9.16	11,965,870	21.50
50,000.00 to	249,999.99	237	4.11	22,301,928	40.08
250,000.00 and greater		31	.54	16,974,117	30.50
Total		**5,762**	**100.00%**	**$55,647,672**	**100.00%**

Table No. 2

Fire Losses by Month, 1989

Month	Number of Fires	Percent	Amount	Percent	Fatalities	Injuries
January	387	6.72%	$ 4,966,149	8.92%	-	26
February	337	5.85	4,247,782	7.63	3	32
March	344	5.97	3,409,241	6.13	-	15
April	573	9.94	4,627,752	8.32	1	21
May	963	16.72	5,015,065	9.01	-	28
June	411	7.13	2,551,787	4.59	4	14
July	480	8.33	5,399,491	9.70	-	17
August	464	8.05	4,649,000	8.35	1	17
September	417	7.24	2,513,519	4.52	1	17
October	643	11.16	3,767,008	6.77	2	11
November	324	5.62	7,094,919	12.75	3	31
December	419	7.27	7,405,959	13.31	7	27
Total	**5,762**	**100.00%**	**$ 55,647,672**	**100.00%**	**22**	**256**

Table No. 3
Fire Losses by Day of Week, 1989

Day	Number of Fires	Percent	Amount	Percent	Fatalities	Injuries
Sunday	771	13.38%	$ 7,090,051	12.74%	3	47
Monday	735	12.76	8,013,576	14.40	2	27
Tuesday	824	14.30	5,286,305	9.50	2	31
Wednesday	801	13.91	9,763,110	17.55	1	36
Thursday	899	15.60	8,526,158	15.32	5	29
Friday	864	14.99	7,277,063	13.08	4	50
Saturday	868	15.06	9,691,409	17.41	5	36
Total	**5,762**	**100.00%**	**$ 55,647,672**	**100.00%**	**22**	**256**

Table No. 4
Fire Losses by Time of Day, 1989

Time	Number of Fires	Percent	Amount	Percent	Fatalities	Injuries
24:00 - 03:59	625	10.85%	$10,799,314	19.41%	1	33
04:00 - 07:59	434	7.53	8,456,057	15.20	5	47
08:00 - 11:59	627	10.88	6,459,111	11.61	6	39
12:00 - 15:59	1,178	20.44	11,421,409	20.52	4	43
16:00 - 19:59	1,288	22.36	7,221,963	12.98	3	55
20:00 - 23:59	933	16.19	6,825,268	12.26	3	36
Unknown	677	11.75	4,464,550	8.02	-	3
Total	**5,762**	**100.00%**	**$55,647,672**	**100.00%**	**22**	**256**

Table No. 5
Fatal Fires, 1980 - 1989

Year	Number of Fires	Men	Women	Children*	Total Fatalities
1980	27	13	11	12	36
1981	36	25	15	12	52
1982	30	15	13	11	39
1983	36	26	9	15	50
1984	22	13	9	11	33
1985	26	22	8	8	38
1986	25	13	13	7	33
1987	23	15	3	8	26
1988	22	14	4	12	30
1989	20	13	3	6	22

**Fifteen years of age and under*

Table No. 6
Fire Fatalities by Property Classification, 1989

Property Classification	Men	Women	Children	Total	Percent
Residential:					
One and Two Family Dwelling	9	2	3	14	63.65%
Apartment, Condominium	-	1	1	2	9.11
Hotel	1	-	-	1	4.54
Mobile Home	-	-	1	1	4.54
Garage	1	-	-	1	4.54
Fuel Tanker	1	-	-	1	4.54
Barn	1	-	-	1	4.54
Shed	-	-	1	1	4.54
Total	**13**	**3**	**6**	**22**	**100.00%**

Table No. 7

Fire Casualties by Age and Sex, 1989

Age	Fatalities			Injuries		
	Firefighter	Male	Female	Firefighter*	Male	Female
Birth - 5	-	5	1	-	2	8
6 - 15	-	-	-	-	7	5
16 - 25	-	4	1	3	19	14
26 - 35	-	-	-	23	17	6
36 - 45	-	-	-	44	8	10
46 - 55	-	1	1	24	6	1
56 - 65	-	3	-	8	3	2
Over 65	-	4	1	-	3	5
Unknown	-	1	-	4	28	6
Total	**-**	**18**	**4**	**106**	**93**	**57**

**No reported injuries to Female Firefighters*

Table No. 8

Fire Casualties by Act or Omission, 1989

Act or Omission	Fatalities			Injuries			
	Men	Women	Children	Firefighters	Men	Women	Children
Incendiary or Set Fire	3	-	-	31	12	2	4
Misuse of Source of Ignition	2	1	2	9	18	11	10
Misuse of Material Ignited	1	-	-	5	5	1	1
Mechanical Electrical Failure Malfunction	-	-	-	15	6	-	1
Construction Design or Installation Deficiency	-	-	-	4	-	-	-
Misuse of Equipment	-	-	-	1	-	-	-
Human Failing	3	1	2	14	23	25	6
Vehicle Accident	-	-	-	-	1	1	-
Undetermined	4	1	2	27	16	3	4
Total	**13**	**3**	**6**	**106**	**81**	**43**	**26**

Table No. 9

Fire Losses by Major Property Classification, 1989

Property Classification	Number of Fires	Percent	Amount	Percent	Fatalities	Injuries
ASSEMBLY						
Theatre, Studio, Auditorium	1	.02%	$ -	- %	-	-
Amusement and Recreation Place	16	.28	71,892	.13	-	-
School, College, University	22	.38	2,212,750	3.98	-	-
Church, Court Room, Funeral Parlour	7	.12	18,000	.03	-	2
Social, Sport Club	2	.03	-	-	-	-
Library, Museum	4	.07	16,400	.03	-	-
Eating Establishment	47	.82	1,774,428	3.19	-	5
Passenger Terminal, Station	3	.05	775	-	-	-
Miscellaneous	-	-	-	-	-	-
Sub-total	**102**	**1.77**	**4,094,245**	**7.36**	**-**	**7**
INSTITUTIONAL						
Prison, Jail, Reformatory	2	.03	-	-	-	-
Home for the Aged	10	.18	4,785	.01	-	-
Children's Hospital	2	.03	1,000	-	-	-
Hospital, Sanitorium, Clinic	15	.26	44,625	.08	-	-
Miscellaneous	1	.02	1,000	-	-	1
Sub-total	**30**	**.52**	**51,410**	**.09**	**-**	**1**
RESIDENTIAL						
Family Residence, Duplex	1,396	24.23	19,404,852	34.87	14	100
Apartment	377	6.54	3,348,491	6.02	2	67
Rooming, Boarding House	31	.54	181,620	.33	-	3
Hotel	43	.75	1,510,599	2.71	1	4
Motor Hotel	5	.09	28,100	.05	-	-
Dormitory	6	.10	550	-	-	-
Mobile Home	67	1.16	1,288,306	2.32	1	6
Miscellaneous	3	.05	6,114	.01	-	-
Sub-total	**1,928**	**33.46**	**25,768,632**	**46.31**	**18**	**180**

Table No. 9 (continued)

Fire Losses by Major Property Classification, 1989

Property Classification	Number of Fires	Percent	Amount	Percent	Fatalities	Injuries
BUSINESS AND PERSONAL SERVICES						
Office	23	.40%	$ 489,852	.88%	-	1
Personal Service	6	.10	17,355	.03	-	-
Electronic Equipment	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	-
Sub-total	**29**	**.50**	**507,207**	**.91**	**-**	**1**
MERCANTILE						
Food, Beverage Sale	11	.19	720,969	1.30	-	2
Textile, Wearing Apparel Sale	5	.09	203,247	.37	-	1
Furniture, Appliance, Hardware Sale	-	-	-	-	-	-
Books, Newspapers, Drugs, Specialties	1	.02	100	-	-	-
Recreation, Hobby Supplies	2	.03	168,500	.30	-	-
Repair Shop, Laundry, Dry Cleaner	5	.09	420	-	-	-
Motor Vehicle, Boat, Sales and Service	22	.38	847,585	1.52	-	2
Department, Variety Store	11	.19	309,650	.56	-	-
Miscellaneous	4	.07	12,000	.02	-	-
Sub-total	**61**	**1.06**	**2,262,471**	**4.07**	**-**	**5**
INDUSTRIAL MANUFACTURING PROPERTIES						
Chemical, Petroleum, Paints, Plastics	5	.09	1,280,019	2.30	-	-
Wood, Furniture, Paper, Printing	20	.35	1,059,418	1.90	-	2
Metal, Metal Products, Electrical Appliances	22	.38	2,297,459	4.12	-	-
Food Processing	16	.28	672,480	1.21	-	-
Beverages, Tobacco, Soap, Margarine	2	.03	3,000	.01	-	-
Textiles	-	-	-	-	-	-
Footwear, Wearing Apparel	5	.09	572,000	1.03	-	2
Vehicles and Related Equipment	2	.03	15,800	.03	-	-
Miscellaneous	4	.07	650,200	1.17	-	-
Sub-total	**76**	**1.32**	**6,550,376**	**11.77**	**-**	**4**

Table No. 9 (continued)

Fire Losses by Major Property Classification, 1989

Property Classification	Number of Fires	Percent	Amount	Percent	Fatalities	Injuries
INDUSTRIAL STORAGE PROPERTIES						
Agricultural Products	20	.35%	$ 400,206	.72%	-	-
Textiles, Fibres, Clothing	1	.02	-	-	-	-
Processed Food, Beverages	2	.03	51,000	.09	-	-
Flammable Liquids, Gases, Petroleum Products	6	.10	71,000	.13	-	2
Wood Furniture, Paper and Products	7	.12	202,616	.36	-	-
Chemicals, Plastics, Paints	1	.02	10	-	-	-
Metal Goods, Machinery, Electrical Appliances	12	.21	157,500	.28	-	-
Vehicles	164	2.85	1,384,709	2.49	1	6
Miscellaneous	13	.23	657,900	1.18	-	1
Sub-total	**226**	**3.93**	**2,924,941**	**5.25**	**1**	**9**
SPECIAL PROPERTY-TRANSPORTATION EQUIPMENT						
Outdoor Property	1,990	34.54	2,329,014	4.18	-	19
Pier, Wharf	3	.05	76,908	.14	-	-
Under Construction/Demolition; Vacant	73	1.27	755,836	1.36	-	10
Watercraft	8	.14	30,653	.06	-	1
Rail Transport Vehicle and Equipment	15	.26	345,500	.62	-	3
Ground Transport Vehicle	812	14.09	2,707,587	4.87	1	6
Aircraft	2	.03	302,500	.54	-	3
Special Vehicle	116	2.01	828,112	1.49	-	-
Miscellaneous	1	.02	1,100	-	-	-
Sub-total	**3,020**	**52.41**	**7,377,210**	**13.26**	**1**	**42**
MISCELLANEOUS PROPERTIES						
Laboratories	3	.05	1,000	-	-	-
Farm Facilities	158	2.74	4,538,304	8.16	1	2
Miscellaneous Outbuildings	75	1.30	674,408	1.21	1	1
Utility	50	.87	622,006	1.12	-	2
Cement, Glass, Pottery Manufacturing	2	.03	29,142	.05	-	1
Mining, Quarrying	1	.02	138,000	.25	-	-
Communications	-	-	-	-	-	-
Nucleonics	-	-	-	-	-	-
Miscellaneous	1	.02	108,320	.19	-	1
Sub-total	**290**	**5.03**	**6,111,180**	**10.98**	**2**	**7**
Total	**5,762**	**100.00%**	**$55,647,672**	**100.00%**	**22**	**256**

Table No. 10

Breakdown of Area of Origin by Property Classification, 1989

Area of Origin of Fire	Assembly				Institutional			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Means of Egress	8	7.84%	$ 5,000	.12%	1	3.33%	$ 200	.39%
Assembly, Sales Area	13	12.75	2,011,375	49.13	1	3.33	25	.05
Function Area	44	43.14	1,170,743	28.59	20	66.68	47,185	91.78
Storage Area	8	7.84	63,675	1.56	1	3.33	-	-
Service Facilities	4	3.92	16,600	.41	1	3.33	-	-
Service and Equipment Area	4	3.92	50,500	1.23	3	10.00	2,000	3.89
Structural Area	13	12.75	655,002	16.00	3	10.00	2,000	3.89
Vehicle Area	1	.98	10,000	.24	-	-	-	-
Outside Area	3	2.94	2,000	.05	-	-	-	-
Undetermined/Unclassified	4	3.92	109,350	2.67	-	-	-	-
Total	**102**	**100.00%**	**$4,094,245**	**100.00%**	**30**	**100.00%**	**$51,410**	**100.00%**

Table No. 10(a)

Breakdown of Area of Origin by Property Classification, 1989

Area of Origin of Fire	Residential				Business and Personal Services			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Means of Egress	80	4.15%	$ 1,162,455	4.51%	2	6.90%	$ 12,000	2.37%
Assembly, Sales Area	279	14.48	4,655,710	18.06	2	6.90	1,000	.20
Function Area	895	46.42	8,422,636	32.68	15	51.72	366,988	72.35
Storage Area	139	7.21	3,081,720	11.96	4	13.79	115,450	22.76
Service Facilities	173	8.97	1,119,896	4.35	1	3.45	-	-
Service and Equipment Area	60	3.11	780,519	3.03	-	-	-	-
Structural Area	137	7.11	2,277,040	8.84	3	10.34	8,769	1.73
Vehicle Area	6	.31	23,200	.09	1	3.45	500	.10
Outside Area	76	3.94	1,771,894	6.88	-	-	-	-
Undetermined/Unclassified	83	4.30	2,473,562	9.60	1	3.45	2,500	.49
Total	**1,928**	**100.00%**	**$25,768,632**	**100.00%**	**29**	**100.00%**	**$507,207**	**100.00%**

Table No. 10(b)

Breakdown of Area of Origin by Property Classification, 1989

Area of Origin of Fire	Mercantile No.	Mercantile Percent	Mercantile Amount	Mercantile Percent	Industrial Manufacturing Properties No.	Industrial Manufacturing Properties Percent	Industrial Manufacturing Properties Amount	Industrial Manufacturing Properties Percent
Means of Egress	5	8.20%	$ 350	.02%	-	- %	$ -	- %
Assembly, Sales Area	3	4.92	209,500	9.26	1	1.32	419	.01
Function Area	9	14.75	615,362	27.19	27	35.53	2,133,461	32.57
Storage Area	14	22.95	498,400	22.03	8	10.53	885,000	13.51
Service Facilities	4	6.56	6,500	.29	6	7.89	24,432	.37
Service and Equipment Area	16	26.22	552,455	24.41	18	23.68	2,818,805	43.03
Structural Area	6	9.84	61,007	2.70	9	11.84	29,319	.45
Vehicle Area	1	1.64	-	-	-	-	-	-
Outside Area	1	1.64	4,000	.18	3	3.95	2,000	.03
Undetermined/Unclassified	2	3.28	314,897	13.92	4	5.26	656,940	10.03
Total	**61**	**100.00%**	**$2,262,471**	**100.00%**	**76**	**100.00%**	**$6,550,376**	**100.00%**

Table No. 10(c)

Breakdown of Area of Origin by Property Classification, 1989

Area of Origin of Fire	Industrial Storage Properties No.	Industrial Storage Properties Percent	Industrial Storage Properties Amount	Industrial Storage Properties Percent	Special Property - Transportation Equipment No.	Special Property - Transportation Equipment Percent	Special Property - Transportation Equipment Amount	Special Property - Transportation Equipment Percent
Means of Egress	-	- %	$ -	- %	7	.23%	$ 58,534	.79%
Assembly, Sales Area	1	.44	500	.02	11	.36	130,579	1.77
Function Area	2	.88	3,200	.11	6	.20	55,300	.75
Storage Area	158	69.92	1,968,290	67.29	19	.63	476,490	6.46
Service Facilities	1	.44	500	.02	1	.03	-	-
Service and Equipment Area	6	2.65	377,000	12.89	2	.07	4,000	.05
Structural Area	17	7.52	46,150	1.58	11	.36	127,713	1.73
Vehicle Area	16	7.08	323,469	11.06	919	30.43	3,701,222	50.18
Outside Area	22	9.74	204,822	7.00	1,994	66.03	2,523,659	34.21
Undetermined/Unclassified	3	1.33	1,010	.03	50	1.66	299,713	4.06
Total	**226**	**100.00%**	**$2,924,941**	**100.00%**	**3,020**	**100.00%**	**$7,377,210**	**100.00%**

Table No. 10(d)

Breakdown of Area of Origin by Property Classification, 1989

Area of Origin of Fire	Miscellaneous Properties No.	Percent	Amount	Percent	Totals of All Property Classifications No.	Percent	Amount	Percent
Means of Egress	2	.69%	$ 6,200	.10%	105	1.82%	$ 1,244,739	2.24%
Assembly, Sales Area	7	2.41	108,470	1.77	318	5.52	7,117,578	12.79
Function Area	3	1.03	147,000	2.41	1,021	17.72	12,961,875	23.29
Storage Area	98	33.80	3,194,964	52.28	449	7.79	10,283,989	18.48
Service Facilities	3	1.03	653,625	10.70	194	3.37	1,821,553	3.27
Service and Equipment Area	8	2.76	281,298	4.60	117	2.03	4,866,577	8.75
Structural Area	9	3.10	126,510	2.07	208	3.61	3,333,510	5.99
Vehicle Area	4	1.38	44,687	.73	948	16.45	4,103,078	7.37
Outside Area	147	50.70	1,176,818	19.26	2,246	38.98	5,685,193	10.22
Undetermined/Unclassified	9	3.10	371,608	6.08	156	2.71	4,229,580	7.60
Total	**290**	**100.00%**	**$6,111,180**	**100.00%**	**5,762**	**100.00%**	**$55,647,672**	**100.00%**

Table No. 11

Breakdown of Act or Omission by Property Classification, 1989

Act or Omission	Assembly				Institutional			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Incendiary or Set Fire	40	39.23%	$2,518,175	61.51%	4	13.33%	$ 12,000	23.34%
Misuse of Source of Ignition	8	7.84	42,202	1.03	6	20.01	1,525	2.97
Misuse of Material Ignited	2	1.96	15,000	.37	1	3.33	1,000	1.95
Mechanical, Electrical Failure, Malfunction	27	26.47	685,941	16.75	8	26.67	27,215	52.93
Construction, Design or Installation Deficiency	-	-	-	-	-	-	-	-
Misuse of Equipment	2	1.96	200	-	-	-	-	-
Human Failing	10	9.80	35,440	.87	7	23.33	4,070	7.92
Vehicle Accident	-	-	-	-	-	-	-	-
Unclassified	5	4.90	41,387	1.01	3	10.00	5,100	9.92
Undetermined/Not Applicable	8	7.84	755,900	18.46	1	3.33	500	.97
Total	**102**	**100.00%**	**$4,094,245**	**100.00%**	**30**	**100.00%**	**$51,410**	**100.00%**

Table No. 11(a)

Breakdown of Act or Omission by Property Classification, 1989

Act or Omission	Residential				Business and Personal Services			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Incendiary or Set Fire	199	10.32%	$ 3,717,745	14.43%	10	34.49%	$ 468,969	92.47%
Misuse of Source of Ignition	327	16.96	3,183,074	12.35	3	10.34	600	.12
Misuse of Material Ignited	65	3.37	956,865	3.71	1	3.45	10,000	1.97
Mechanical, Electrical Failure, Malfunction	423	21.94	5,063,118	19.65	9	31.03	18,055	3.56
Construction, Design or Installation Deficiency	51	2.65	1,375,997	5.34	-	-	-	-
Misuse of Equipment	22	1.14	236,935	.92	-	-	-	-
Human Failing	504	26.15	2,972,120	11.53	2	6.90	2,000	.39
Vehicle Accident	2	.10	53,200	.21	-	-	-	-
Unclassified	83	4.30	689,973	2.68	1	3.45	583	.11
Undetermined/Not Applicable	252	13.07	7,519,605	29.18	3	10.34	7,000	1.38
Total	**1,928**	**100.00%**	**$25,768,632**	**100.00%**	**29**	**100.00%**	**$507,207**	**100.00%**

Table No. 11(b)

Breakdown of Act or Omission by Property Classification, 1989

Act or Omission	Mercantile				Industrial Manufacturing Properties			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Incendiary or Set Fires	18	29.50%	$ 550,947	24.35%	4	5.26%	$1,736,640	26.51%
Misuse of Source of Ignition	6	9.84	170,000	7.51	11	14.47	60,273	.92
Misuse of Material Ignited	3	4.92	197,750	8.74	3	3.95	65,000	.99
Mechanical and Electrical Failure, Malfunction	12	19.67	409,027	18.08	23	30.27	3,142,767	47.99
Construction, Design or Installation Deficiency	5	8.20	49,085	2.17	2	2.63	125,200	1.91
Misuse of Equipment	-	-	-	-	4	5.26	-	-
Human Failing	2	3.28	5,362	.24	2	2.63	10,000	.15
Vehicle Accident	1	1.64	4,000	.18	-	-	-	-
Unclassified	3	4.92	2,100	.09	7	9.21	4,119	.06
Undetermined/Not Applicable	11	18.03	874,200	38.64	20	26.32	1,406,377	21.47
Total	**61**	**100.00%**	**$2,262,471**	**100.00%**	**76**	**100.00%**	**$6,550,376**	**100.00%**

Table No. 11(c)

Breakdown of Act or Omission by Property Classification, 1989

Act or Omission	Industrial Storage Properties				Special Property - Transportation Equipment			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Incendiary or Set Fires	60	26.56%	$ 747,575	25.56%	1,151	38.12%	$2,159,981	29.28%
Misuse of Source of Ignition	22	9.73	122,901	4.20	385	12.75	455,111	6.17
Misuse of Material Ignited	19	8.41	148,138	5.06	28	.93	116,113	1.57
Mechanical and Electrical Failure, Malfunction	44	19.47	555,917	19.01	277	9.17	1,027,620	13.93
Construction, Design or Installation Deficiency	8	3.54	46,158	1.58	-	-	-	-
Misuse of Equipment	2	.88	201,000	6.87	4	.13	110,500	1.50
Human Failing	10	4.42	43,372	1.48	123	4.07	157,665	2.14
Vehicle Accident	-	-	-	-	24	.79	832,400	11.28
Unclassified	8	3.54	54,735	1.87	78	2.58	120,815	1.64
Undetermined/Not Applicable	53	23.45	1,005,145	34.37	950	31.46	2,397,005	32.49
Total	**226**	**100.00%**	**$2,924,941**	**100.00%**	**3,020**	**100.00%**	**$7,377,210**	**100.00%**

Table No. 11(d)

Breakdown of Act or Omission by Property Classification, 1989

Act or Omission	Miscellaneous Properties				Totals of All Property Classifications			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Incendiary or Set Fires	59	20.34%	$ 621,775	10.17%	1,545	26.81%	$12,533,807	22.52%
Misuse of Source of Ignition	34	11.72	761,889	12.47	802	13.92	4,797,575	8.62
Misuse of Material Ignited	8	2.76	13,540	.22	130	2.26	1,523,406	2.74
Mechanical and Electrical Failure, Malfunction	61	21.04	1,702,772	27.86	884	15.34	12,632,432	22.70
Construction, Design or Installation Deficiency	3	1.03	16,500	.27	69	1.20	1,612,940	2.90
Misuse of Equipment	-	-	-	-	34	.59	548,635	.99
Human Failing	9	3.10	40,650	.67	669	11.61	3,270,679	5.88
Vehicle Accident	2	.69	23,000	.38	29	.50	912,600	1.64
Unclassified	39	13.45	165,132	2.70	227	3.94	1,083,944	1.95
Undetermined/Not Applicable	75	25.87	2,765,922	45.26	1,373	23.83	16,731,654	30.06
Total	**290**	**100.00%**	**$6,111,180**	**100.00%**	**5,762**	**100.00%**	**$55,647,672**	**100.00%**

Table No. 12

Breakdown of Source of Heat of Ignition by Property Classification, 1989

Source of Heat of Ignition	Assembly No.	Assembly Percent	Assembly Amount	Assembly Percent	Institutional No.	Institutional Percent	Institutional Amount	Institutional Percent
Electrical Distribution Equipment-Aluminum	-	- %	$ -	- %	-	- %	$ -	- %
Heating Equipment	5	4.90	25,100	.61	3	10.00	3,000	5.84
Cooking Equipment	23	22.55	55,206	1.35	4	13.33	1,460	2.84
Smoker's Material	4	3.92	32,152	.79	6	20.01	1,525	2.97
Electrical Distribution Equipment-Copper	8	7.84	517,975	12.65	2	6.67	200	.39
Electrical Appliance and Equipment	5	4.90	16,200	.40	1	3.33	5,000	9.73
Other Appliance and Equipment	3	2.94	12,200	.30	7	23.33	27,225	52.95
Open Flame	40	39.23	2,469,625	60.31	7	23.33	13,000	25.28
Exposure	2	1.96	1,900	.05	-	-	-	-
Miscellaneous	3	2.94	150,987	3.69	-	-	-	-
Undetermined/Unclassified	9	8.82	812,900	19.85	-	-	-	-
Total	**102**	**100.00%**	**$4,094,245**	**100.00%**	**30**	**100.00%**	**$51,410**	**100.00%**

Table No. 12(a)

Breakdown of Source of Heat of Ignition by Property Classification, 1989

Source of Heat of Ignition	Residential No.	Residential Percent	Residential Amount	Residential Percent	Business and Personal Services No.	Business and Personal Services Percent	Business and Personal Services Amount	Business and Personal Services Percent
Electrical Distribution Equipment-Aluminum	3	.16%	$ 65,500	.25%	-	- %	$ -	- %
Heating Equipment	340	17.63	3,658,293	14.20	-	-	-	-
Cooking Equipment	480	24.89	2,493,477	9.68	3	10.34	2,200	.43
Smoker's Material	181	9.39	1,744,698	6.77	3	10.34	600	.12
Electrical Distribution Equipment-Copper	120	6.22	3,084,450	11.97	1	3.45	10,000	1.97
Electrical Appliance and Equipment	90	4.67	1,324,416	5.14	4	13.79	7,000	1.38
Other Appliance and Equipment	73	3.79	118,938	.46	3	10.34	4,855	.96
Open Flame	316	16.39	3,421,247	13.28	5	17.25	3,500	.69
Exposure	65	3.37	1,913,220	7.42	2	6.90	13,300	2.62
Miscellaneous	73	3.79	964,066	3.74	3	10.34	10,583	2.09
Undetermined/Unclassified	187	9.70	6,980,327	27.09	5	17.25	455,169	89.74
Total	**1,928**	**100.00%**	**$25,768,632**	**100.00%**	**29**	**100.00%**	**$507,207**	**100.00%**

Table No. 12(b)

Breakdown of Source of Heat of Ignition by Property Classification, 1989

Source of Heat of Ignition	Mercantile No.	Percent	Amount	Percent	Industrial Manufacturing Properties No.	Percent	Amount	Percent
Electrical Distribution Equipment-Aluminum	-	- %	$ -	- %	-	- %	$ -	- %
Heating Equipment	10	16.39	73,935	3.27	8	10.53	34,008	.52
Cooking Equipment	2	3.28	5,362	.24	4	5.26	137,961	2.11
Smoker's Material	2	3.28	-	-	1	1.32	100	-
Electrical Distribution Equipment-Copper	4	6.56	190,907	8.44	7	9.21	2,696,913	41.17
Electrical Appliance and Equipment	5	8.20	396,700	17.53	6	7.89	695,500	10.62
Other Appliance and Equipment	3	4.92	2,420	.11	5	6.58	24,200	.37
Open Flame	21	34.42	593,947	26.25	7	9.21	411,573	6.28
Exposure	1	1.64	27,000	1.19	2	2.63	34,000	.52
Miscellaneous	1	1.64	-	-	19	25.00	381,265	5.82
Undetermined/Unclassified	12	19.67	972,200	42.97	17	22.37	2,134,856	32.59
Total	**61**	**100.00%**	**$2,262,471**	**100.00%**	**76**	**100.00%**	**$6,550,376**	**100.00%**

Table No. 12(c)

Breakdown of Source of Heat of Ignition by Property Classification, 1989

Source of Heat of Ignition	Industrial Storage Properties No.	Percent	Amount	Percent	Special Property - Transportation Equipment No.	Percent	Amount	Percent
Electrical Distribution Equipment-Aluminum	-	- %	$ -	- %	-	- %	$ -	- %
Heating Equipment	18	7.96	180,908	6.19	18	.60	393,666	5.34
Cooking Equipment	2	.88	24,500	.84	43	1.42	13,625	.18
Smoker's Material	3	1.33	8,772	.30	32	1.06	4,200	.06
Electrical Distribution Equipment-Copper	24	10.62	214,777	7.34	99	3.28	459,150	6.22
Electrical Appliance and Equipment	17	7.52	133,723	4.57	23	.76	42,300	.57
Other Appliance and Equipment	2	.88	9,656	.33	137	4.54	263,955	3.58
Open Flame	71	31.42	849,868	29.06	1,470	48.67	2,544,376	34.49
Exposure	17	7.52	110,654	3.78	126	4.17	319,988	4.34
Miscellaneous	19	8.41	121,038	4.14	80	2.65	611,189	8.28
Undetermined/Unclassified	53	23.46	1,271,045	43.45	992	32.85	2,724,761	36.94
Total	**226**	**100.00%**	**$2,924,941**	**100.00%**	**3,020**	**100.00%**	**$7,377,210**	**100.00%**

Table No. 12(d)

Breakdown of Source of Heat of Ignition by Property Classification, 1989

Source of Heat of Ignition	Miscellaneous Properties No.	Percent	Amount	Percent	Totals of All Property Classifications No.	Percent	Amount	Percent
Electrical Distribution Equipment-Aluminum	-	- %	$ -	- %	3	.05%	$ 65,500	.12%
Heating Equipment	11	3.79	63,593	1.04	413	7.17	4,432,503	7.97
Cooking Equipment	1	.34	9,000	.15	562	9.75	2,742,791	4.93
Smoker's Material	4	1.38	112,820	1.85	236	4.10	1,904,867	3.42
Electrical Distribution Equipment-Copper	47	16.21	931,154	15.24	312	5.41	8,105,526	14.57
Electrical Appliance and Equipment	14	4.83	105,111	1.72	165	2.86	2,725,950	4.90
Other Appliance and Equipment	13	4.48	50,030	.82	246	4.27	513,479	.92
Open Flame	65	22.41	773,041	12.65	2,002	34.75	11,080,177	19.91
Exposure	29	10.00	472,208	7.73	244	4.23	2,892,270	5.20
Miscellaneous	31	10.69	178,667	2.92	229	3.97	2,417,795	4.34
Undetermined/Unclassified	75	25.87	3,415,556	55.88	1,350	23.44	18,766,814	33.72
Total	**290**	**100.00%**	**$6,111,180**	**100.00%**	**5,762**	**100.00%**	**$55,647,672**	**100.00%**

Table No. 13

Breakdown of Fuel or Energy by Property Classification, 1989

Fuel or Energy	Assembly No.	Assembly Percent	Assembly Amount	Assembly Percent	Institutional No.	Institutional Percent	Institutional Amount	Institutional Percent
Coal, Wood	5	4.90%	$ 16,200	.40%	5	16.67%	$ -	- %
Fuel Oil	-	-	-	-	-	-	-	-
Gasoline	-	-	-	-	-	-	-	
Natural Gas	8	7.84	8,500	.21	2	6.67	1,100	2.14
Propane	4	3.92	20,000	.49	1	3.33	-	-
Smoker's Material	4	3.92	32,152	.79	6	20.00	1,525	2.97
Electricity	30	29.41	747,581	18.26	11	36.67	33,785	65.71
Lightning	2	1.96	987	.02	-	-	-	-
Unclassified	1	.98	-	-	1	3.33	2,000	3.89
Undetermined/Not Applicable	48	47.07	3,268,825	79.83	4	13.33	13,000	25.29
Total	**102**	**100.00%**	**$4,094,245**	**100.00%**	**30**	**100.00%**	**$51,410**	**100.00%**

Table No. 13(a)

Breakdown of Fuel or Energy by Property Classification, 1989

Fuel or Energy	Residential No.	Residential Percent	Residential Amount	Residential Percent	Business and Personal Services No.	Business and Personal Services Percent	Business and Personal Services Amount	Business and Personal Services Percent
Coal, Wood	312	16.18%	$ 2,626,685	10.19%	-	- %	$ -	- %
Fuel Oil	17	.88	203,117	.79	-	-	-	-
Gasoline	9	.47	88,805	.34	-	-	-	-
Natural Gas	20	1.04	450,745	1.75	-	-	-	-
Propane	66	3.42	683,506	2.65	-	-	-	-
Smoker's Material	185	9.60	1,885,721	7.32	3	10.34	600	.12
Electricity	640	33.20	6,932,617	26.91	12	41.38	24,055	4.74
Lightning	50	2.59	405,342	1.57	1	3.45	583	.11
Unclassified	45	2.33	657,918	2.55	-	-	-	-
Undetermined/Not Applicable	584	30.29	11,834,176	45.93	13	44.83	481,969	95.03
Total	**1,928**	**100.00%**	**$25,768,632**	**100.00%**	**29**	**100.00%**	**$507,207**	**100.00%**

Table No. 13(b)

Breakdown of Fuel or Energy by Property Classification, 1989

Fuel or Energy	Mercantile No.	Mercantile Percent	Mercantile Amount	Mercantile Percent	Industrial Manufacturing Properties No.	Industrial Manufacturing Properties Percent	Industrial Manufacturing Properties Amount	Industrial Manufacturing Properties Percent
Coal, Wood	5	8.20%	$ 54,200	2.40%	6	7.89%	$ 17,808	.27%
Fuel Oil	1	1.64	100	-	3	3.95	30,200	.46
Gasoline	-	-	-	-	1	1.32	7,000	.11
Natural Gas	4	6.56	2,770	.12	4	5.26	30,000	.46
Propane	6	9.84	185,000	8.18	5	6.58	111,000	1.69
Smoker's Material	2	3.28	-	-	1	1.32	100	-
Electricity	13	21.31	600,669	26.55	19	25.00	3,759,232	57.39
Lightning	-	-	-	-	-	-	-	-
Unclassified	1	1.64	-	-	5	6.58	50,800	.78
Undetermined/Not Applicable	29	47.53	1,419,732	62.75	32	42.10	2,544,236	38.84
Total	**61**	**100.00%**	**$2,262,471**	**100.00%**	**76**	**100.00%**	**$6,550,376**	**100.00%**

Table No. 13(c)

Breakdown of Fuel or Energy by Property Classification, 1989

Fuel or Energy	Industrial Storage Properties No.	Industrial Storage Properties Percent	Industrial Storage Properties Amount	Industrial Storage Properties Percent	Special Property - Transportation Equipment No.	Special Property - Transportation Equipment Percent	Special Property - Transportation Equipment Amount	Special Property - Transportation Equipment Percent
Coal, Wood	25	11.06%	$ 188,513	6.45%	339	11.23%	$ 94,669	1.28%
Fuel Oil	-	-	-	-	58	1.92	112,660	1.53
Gasoline	4	1.77	12,741	.44	88	2.91	247,653	3.36
Natural Gas	3	1.33	53,000	1.81	2	.07	70,978	.96
Propane	7	3.10	17,750	.61	68	2.25	348,844	4.73
Smoker's Material	3	1.33	8,772	.30	31	1.03	4,200	.06
Electricity	42	18.58	323,850	11.07	130	4.30	546,837	7.41
Lightning	2	.88	20,000	.68	5	.17	22,532	.31
Unclassified	6	2.65	56,700	1.94	20	.66	360,800	4.89
Undetermined/Not Applicable	134	59.30	2,243,615	76.70	2,279	75.46	5,568,037	75.47
Total	**226**	**100.00%**	**$2,924,941**	**100.00%**	**3,020**	**100.00%**	**$7,377,210**	**100.00%**

Table No. 13(d)

Breakdown of Fuel or Energy by Property Classification, 1989

Fuel or Energy	Miscellaneous Properties No.	Percent	Amount	Percent	Totals of All Property Classifications No.	Percent	Amount	Percent
Coal, Wood	34	11.72%	$ 125,146	2.05%	731	12.69%	$ 3,123,221	5.61%
Fuel Oil	9	3.10	23,230	.38	88	1.53	369,307	.66
Gasoline	6	2.07	750	.01	108	1.87	356,949	.64
Natural Gas	-	-	-	-	43	.75	617,093	1.11
Propane	5	1.72	206,098	3.37	162	2.81	1,572,198	2.83
Smoker's Material	4	1.38	112,820	1.85	239	4.15	2,045,890	3.68
Electricity	61	21.04	1,358,283	22.23	958	16.62	14,326,909	25.75
Lightning	17	5.86	131,227	2.15	77	1.34	580,671	1.04
Unclassified	5	1.72	156,200	2.56	84	1.46	1,284,418	2.31
Undetermined/Not Applicable	149	51.39	3,997,426	65.40	3,272	56.78	31,371,016	56.37
Total	**290**	**100.00%**	**$6,111,180**	**100.00%**	**5,762**	**100.00%**	**$55,647,672**	**100.00%**

Table No. 14

Breakdown of Material First Ignited by Property Classification, 1989

Material First Ignited	Assembly				Institutional			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Structural Components, Finish Materials	8	7.84%	$ 43,502	1.06%	-	- %	$ -	- %
Furniture, Furnishings	2	1.96	4,550	.11	3	10.00	1,940	3.77
Clothing, Textiles	4	3.92	12,200	.30	8	26.67	43,150	83.94
Wood, Paper Products	18	17.65	29,150	.71	5	16.66	-	-
Flammable Liquids	25	24.51	2,461,749	60.13	2	6.67	575	1.12
Flammable Gases	2	1.96	10,000	.24	1	3.33	-	-
Chemicals	3	2.94	600	.01	1	3.33	1,020	1.98
Agricultural, Forest Products	2	1.96	400	.01	2	6.67	2,000	3.89
Miscellaneous	19	18.63	32,982	.81	8	26.67	2,725	5.30
Undetermined/Unclassified	19	18.63	1,499,112	36.62	-	-	-	-
Total	**102**	**100.00%**	**$4,094,245**	**100.00%**	**30**	**100.00%**	**$51,410**	**100.00%**

Table No. 14(a)

Breakdown of Material First Ignited by Property Classification, 1989

Material First Ignited	Residential				Business and Personal Services			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Structural Components, Finish Materials	280	14.52%	$ 4,180,145	16.22%	4	13.79%	$ 11,700	2.31%
Furniture, Furnishings	302	15.66	3,048,149	11.83	-	-	-	-
Clothing, Textiles	93	4.82	1,149,789	4.46	1	3.45	4,000	.79
Wood, Paper Products	122	6.33	845,558	3.28	6	20.69	109,319	21.55
Flammable Liquids	369	19.14	2,223,504	8.63	2	6.90	12,300	2.43
Flammable Gases	20	1.04	35,666	.14	-	-	-	-
Chemicals	30	1.56	78,292	.30	2	6.90	2,655	.52
Agricultural, Forest Products	69	3.58	1,751,073	6.80	-	-	-	-
Miscellaneous	369	19.14	3,485,508	13.53	10	34.48	18,150	3.58
Undetermined/Unclassified	274	14.21	8,970,948	34.81	4	13.79	349,083	68.82
Total	**1,928**	**100.00%**	**$25,768,632**	**100.00%**	**29**	**100.00%**	**$507,207**	**100.00%**

Table No. 14(b)

Breakdown of Material First Ignited by Property Classification, 1989

Material First Ignited	Mercantile				Industrial Manufacturing Properties			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Structural Components, Finish Materials	10	16.39%	$ 377,500	16.69%	9	11.84%	$ 143,069	2.18%
Furniture, Furnishings	-	-	-	-	1	1.32	100,000	1.53
Clothing, Textiles	3	4.92	2,250	.10	3	3.95	3,973	.06
Wood, Paper Products	8	13.11	14,600	.65	10	13.16	276,946	4.23
Flammable Liquids	9	14.75	515,432	22.78	6	7.89	34,000	.52
Flammable Gases	2	3.28	15,420	.68	7	9.21	209,600	3.20
Chemicals	3	4.92	73,100	3.23	6	7.89	85,619	1.31
Agricultural, Forest Products	-	-	-	-	5	6.58	4,500	.07
Miscellaneous	14	22.96	33,069	1.46	13	17.11	2,517,313	38.43
Undetermined/Unclassified	12	19.67	1,231,100	54.41	16	21.05	3,175,356	48.47
Total	**61**	**100.00%**	**$2,262,471**	**100.00%**	**76**	**100.00%**	**$6,550,376**	**100.00%**

Table No. 14(c)

Breakdown of Material First Ignited by Property Classification, 1989

Material First Ignited	Industrial Storage Properties				Special Property - Transportation Equipment			
	No.	Percent	Amount	Percent	No.	Percent	Amount	Percent
Structural Components, Finish Materials	28	12.39%	$ 227,453	7.78%	23	.76%	$ 201,401	2.73%
Furniture, Furnishings	2	.88	150	.01	14	.46	4,050	.05
Clothing, Textiles	2	.88	-	-	13	.43	5,900	.08
Wood, Paper Products	21	9.29	260,052	8.89	85	2.81	1,574,844	21.35
Flammable Liquids	9	3.98	266,386	9.11	118	3.91	1,110,709	15.06
Flammable Gases	7	3.10	35,900	1.23	40	1.32	14,100	.19
Chemicals	9	3.98	355,485	12.15	32	1.06	32,362	.44
Agricultural, Forest Products	16	7.08	106,506	3.64	978	32.39	584,683	7.93
Miscellaneous	33	14.60	127,880	4.37	957	31.69	428,377	5.81
Undetermined/Unclassified	99	43.82	1,545,129	52.82	760	25.17	3,420,784	46.36
Total	**226**	**100.00%**	**$2,924,941**	**100.00%**	**3,020**	**100.00%**	**$7,377,210**	**100.00%**

Table No. 14(d)

Breakdown of Material First Ignited by Property Classification, 1989

Material First Ignited	Miscellaneous Properties No.	Percent	Amount	Percent	Totals of All Property Classifications No.	Percent	Amount	Percent
Structural Components, Finish Materials	24	8.28%	$ 866,018	14.17%	386	6.70%	$ 6,050,788	10.87%
Furniture, Furnishings	5	1.72	109,870	1.80	329	5.71	3,268,709	5.87
Clothing, Textiles	-	-	-	-	127	2.20	1,221,262	2.19
Wood, Paper Products	21	7.24	822,625	13.46	296	5.14	3,933,094	7.07
Flammable Liquids	5	1.72	84,550	1.38	545	9.46	6,709,205	12.06
Flammable Gases	-	-	-	-	79	1.37	320,686	.58
Chemicals	2	.69	176,578	2.89	88	1.53	805,711	1.45
Agricultural, Forest Products	106	36.56	914,115	14.96	1,178	20.44	3,363,277	6.04
Miscellaneous	54	18.62	266,769	4.37	1,477	25.63	6,912,773	12.42
Undetermined/Unclassified	73	25.17	2,870,655	46.97	1,257	21.82	23,062,167	41.45
Total	**290**	**100.00%**	**$6,111,180**	**100.00%**	**5,762**	**100.00%**	**$55,647,672**	**100.00%**

Table No. 15

Breakdown of Fires by Community or Area, 1989

Municipal Code	Name	Number of Fires	Amount	Fatalities	Injuries
001	R.M. of Albert	3	$ -	-	-
002	Town of Altona	5	45,900	-	1
003	Village of Arborg	8	22,315	-	-
004	R.M. of Archie	4	12,020	-	-
005	R.M. of Argyle	12	54,247	-	3
006	R.M. of Arthur	3	53,000	-	-
010	Town of Beausejour	8	145,534	-	-
011	Village of Benito	2	-	-	-
012	R.M. of Bifrost	21	369,075	-	-
013	Village of Binscarth	1	200	-	-
014	R.M. of Birtle	3	111,725	1	-
015	Town of Birtle	2	24,500	-	-
016	R.M. of Blanshard	2	7,419	-	-
017	Town of Boissevain	1	6,500	-	-
018	R.M. of Boulton	4	950	-	-
019	Village of Bowsman	3	12,614	-	-
020	City of Brandon	177	475,019	-	7
021	R.M. of Brenda	2	30,000	-	-
022	R.M. of Brokenhead	18	357,470	-	1
026	R.M. of Cameron	2	32,100	-	-
027	Town of Carberry	2	16,500	-	-
028	Town of Carman	2	25,000	-	-
029	R.M. of Cartier	10	61,005	-	-
030	Village of Cartwright	2	725	-	-
032	R.M. of Clanwilliam	7	97,000	-	-
033	R.M. of Coldwell	11	147,400	-	-
034	R.M. of Cornwallis	22	96,802	-	-
035	Village of Crystal City	1	400	-	-
038	R.M. of Daly	3	67,317	-	-
039	R.M. of Dauphin	25	195,650	-	-
040	Town of Dauphin	31	233,144	-	1
042	R.M. of De Salaberry	11	365,063	-	-
043	R.M. of Dufferin	14	210,350	-	-
044	Village of Dunnottar	3	18,000	-	-
048	R.M. of East St. Paul	20	239,995	-	1
050	Village of Elkhorn	2	46,326	-	-
051	R.M. of Ellice	1	35,000	-	-
052	R.M. of Ellice	11	3,000	-	-
053	Town of Emerson	4	22,100	-	-
054	Village of Erickson	1	419	-	-
055	R.M. of Eriksdale	54	1,952,628	-	-
056	R.M. of Ethelbert	8	20,000	-	-
057	Village of Ethelbert	2	1,000	-	-

Table No. 15 (continued)

Breakdown of Fires by Community or Area, 1989

Municipal Code	Name	Number of Fires	Amount	Fatalities	Injuries
058	Village of Elm Creek	3	$ 80,857	-	-
059	Village of Fannystelle	1	1,000	-	-
060	City of Flin Flon	55	319,205	1	-
063	R.M. of Franklin	33	292,037	-	2
067	R.M. of Gilbert Plains	15	8,375	-	-
068	Village of Gilbert Plains	3	150,000	-	-
069	R.M. of Gimli	12	90,752	-	-
070	Town of Gimli	2	700	-	-
071	Town of Gladstone	2	2,000	-	-
072	Village of Glenboro	2	500	-	-
073	R.M. of Glenella	5	4,150	-	-
074	R.M. of Glenwood	1	8,750	-	-
075	R.M. of Grandview	3	18,800	-	-
076	Town of Grandview	1	20,000	-	-
077	Village of Grand Marais	1	134	-	-
078	Village of Gretna	1	900	-	-
079	R.M. of Grey	17	321,639	-	-
081	Village of Haywood	1	89,894	-	-
082	R.M. of Hamiota	4	-	-	-
083	Village of Hamiota	2	-	-	-
084	R.M. of Hanover	61	1,122,726	1	-
085	R.M. of Harrison	1	74,000	-	-
086	Town of Hartney	1	13,020	-	-
087	R.M. of Hillsburg	4	17,800	-	-
090	Town of Killarney	12	62,820	-	-
092	Village of La Riviere	1	6,000	-	-
093	R.M. of La Broquerie	8	211,295	-	-
094	R.M. of Lac du Bonnet	12	306,954	-	-
095	Village of Lac du Bonnet	4	8,254	-	-
096	R.M. of Lakeview	1	11,000	-	-
097	R.M. of Langford	10	74,128	-	-
098	R.M. of Lansdowne	2	108,400	-	-
099	R.M. of Lawrence	13	64,800	-	-
100	R.M. of Lorne	10	10,367	-	-
101	R.M. of Louise	2	575	-	-
103	Village of Letellier	1	105,912	-	-
104	R.M. of MacDonald	40	564,276	-	1
105	Village of MacGregor	4	66,211	-	1
107	R.M. of McCreary	2	8,900	-	-
108	Village of McCreary	1	86,600	-	-
111	Town of Melita	3	13,482	-	-
112	R.M. of Miniota	14	17,000	-	-
113	R.M. of Minitonas	15	18,436	-	-
114	Village of Minitonas	2	6,000	-	-

Table No. 15 (continued)

Breakdown of Fires by Community or Area, 1989

Municipal Code	Name	Number of Fires	Amount	Fatalities	Injuries
115	Town of Minnedosa	5	$ 33,426	-	-
116	R.M. of Minto	5	1,700	-	-
117	R.M. of Montcalm	3	10,700	-	-
118	Town of Morden	12	14,966	-	-
119	R.M. of Morris	12	68,110	-	-
120	Town of Morris	5	3,394	-	-
121	R.M. of Morton	8	165,480	2	-
122	R.M. of Mossey River	4	-	-	-
123	Village of Newdale	1	-	-	-
125	Town of Neepawa	6	13,028	-	-
126	Village of Niverville	1	600	-	-
127	R.M. of North Cypress	12	11,487	-	1
128	Village of Ninette	1	3,000	-	-
129	R.M. of North Norfolk	19	325,330	-	-
133	Town of Oak Lake	1	16,608	-	-
134	R.M. of Oakland	4	88,960	-	-
135	R.M. of Ochre River	4	15,000	-	-
136	R.M. of Odanah	1	-	-	-
140	R.M. of Pembina	1	7,000	-	-
141	Village of Pilot Mound	1	500	-	-
142	R.M. of Pipestone	8	7,250	-	-
143	Village of Plum Coulee	2	925	-	-
144	R.M. of Portage La Prairie	24	632,914	-	-
145	City of Portage La Prairie	34	374,783	-	1
149	Town of Rapid City	1	4,342	-	-
150	R.M. of Rhineland	25	99,471	-	-
151	R.M. of Ritchot	26	298,376	-	-
152	Town of Rivers	3	32,000	-	-
153	R.M. of Riverside	5	142,270	-	-
154	Village of Riverton	1	10,000	-	-
155	R.M. of Roblin	14	29,416	-	1
156	Town of Roblin	3	11,481	-	-
157	R.M. of Rockwood	23	272,483	-	-
158	R.M. of Roland	4	233,000	-	-
159	R.M. of Rosedale	9	-	-	-
160	R.M. of Rossburn	1	4,000	-	-
161	Village of Rossburn	4	110,641	-	-
162	R.M. of Rosser	14	196,525	-	1
163	R.M. of Russell	4	-	-	-
164	Town of Russell	2	1,540	-	-
167	R.M. of St. Andrews	15	684,394	-	1
168	R.M. of Ste. Anne	16	1,263,443	-	-
169	Village of Ste. Anne	5	6,399	-	-
170	Village of Swan Lake	1	2,000	-	-

Table No. 15 (continued)

Breakdown of Fires by Community or Area, 1989

Municipal Code	Name	Number of Fires	Amount	Fatalities	Injuries
172	R.M. of St. Clements	21	$ 663,938	-	3
173	R.M. of St. Francois Xavier	3	593,110	-	-
174	Village of St. Malo	2	4,309	-	-
175	R.M. of St. Laurent	4	152,000	-	1
178	R.M. of Ste. Rose	9	124,502	-	-
179	Village of Ste. Rose du Lac	4	13,500	-	-
181	Village of Sandy Lake	1	45,500	-	-
182	R.M. of Saskatchewan	9	332,770	-	-
183	Town of Selkirk	35	184,675	-	-
184	R.M. of Shellmouth	8	111,000	-	-
185	R.M. of Shell River	1	10,000	-	-
186	R.M. of Shoal Lake	10	30,000	-	-
187	Village of Shoal Lake	1	197,500	-	1
188	R.M. of Sifton	13	205,114	-	-
189	R.M. of Siglunes	12	79,482	-	-
190	R.M. of Silver Creek	1	322,000	-	-
191	Village of Somerset	2	375,359	-	-
192	Town of Souris	2	-	-	-
193	R.M. of South Cypress	12	33,100	-	-
194	R.M. of South Norfolk	7	256,534	-	-
195	R.M. of Springfield	128	572,786	-	-
196	R.M. of Stanley	34	690,474	-	-
197	Town of Steinbach	27	87,900	-	1
198	Town of Stonewall	5	53,549	-	-
199	R.M. of Strathclair	2	35,000	-	-
200	R.M. of Strathcona	7	12,543	-	-
201	R.M. of Swan River	21	442,920	-	-
202	Town of Swan River	9	80,611	-	-
203	Village of Stony Mountain	3	1,786	-	-
205	R.M. of Tache	33	805,600	-	2
207	Town of The Pas	40	253,201	3	5
208	R.M. of Thompson	2	14,223	-	-
209	City of Thompson	124	2,016,767	-	5
212	R.M. of Turtle Mountain	12	255,101	-	2
216	R.M. of Victoria	4	400,934	-	-
217	R.M. of Victoria Beach	4	15,566	-	-
218	Town of Virden	8	2,021	-	-
221	R.M. of Wallace	14	309,870	-	-
222	Village of Waskada	2	32,741	-	-
223	Village of Wawanesa	1	548	-	-
224	R.M. of Westbourne	17	71,783	-	-
226	R.M. of West St. Paul	28	195,718	-	-
227	R.M. of Whitehead	9	11,200	-	-
228	R.M. of Whitemouth	15	17,167	-	1

Table No. 15 (continued)

Breakdown of Fires by Community or Area, 1989

Municipal Code	Name	Number of Fires	Amount	Fatalities	Injuries
229	R.M. of Whitewater	1	$ 19,322	-	-
230	R.M. of Winchester	4	20,956	-	-
231	Town of Winkler	11	1,913,726	-	1
232	City of Winnipeg	3,177	22,932,206	4	204
233	Town of Winnipeg Beach	3	608	-	-
234	Village of Winnipegosis	7	16,335	1	-
235	R.M. of Woodlands	19	102,868	-	-
236	R.M. of Woodworth	6	1,050	-	-
237	Community of Warren	2	7,300	-	1
238	LGD of Alexander	18	204,619	-	-
240	LGD of Alonsa	11	184,240	-	-
242	LGD of Armstrong	8	141,145	-	-
246	LGD of Consol	4	268,600	-	-
248	LGD of Fisher	52	46,440	-	-
250	LGD of Gillam	15	3,605	-	-
252	LGD of Grahamdale	98	136,777	1	-
255	Bissett	1	15,000	-	-
256	Town of Leaf Rapids	6	138,000	-	-
258	LGD of Lynn Lake	13	39,000	-	-
259	Island Lake	1	2,500	-	-
260	LGD of Mountain	9	172,400	-	-
262	LGD of Mystery Lake	3	342,500	-	2
264	LGD of Park	2	80,000	-	-
265	Meadow Portage	3	3,500	1	-
266	LGD of Pinawa	8	85,500	-	1
268	LGD of Piney	12	318,756	-	-
269	Dallas/Red Rose	13	10,100	-	-
270	LGD of Reynolds	8	130,434	1	1
271	Cross Lake	18	500	-	-
272	Town of Snow Lake	6	143,450	-	1
273	Dakota Ojibway Tribal Council	15	113,500	-	-
274	LGD of Stuartburn	8	118,208	-	-
275	Berens River	3	25,000	-	-
277	Waterhen	3	10,000	-	-
278	Cranberry Portage	10	723,824	-	-
279	Thicket Portage	4	10,000	-	-
283	Easterville	3	-	-	-
285	Mallard	3	40,000	-	-
287	Pelican Rapids	1	25,000	-	-
290	Sherridon	1	20,000	-	-
291	Duck Bay	4	7,900	-	-
292	National Mills	1	-	-	-
294	Camperville	2	2,000	-	1
296	Moose Lake	4	3,000	-	-

Table No. 15 (continued)

Breakdown of Fires by Community or Area, 1989

Municipal Code	Name	Number of Fires	Amount	Fatalities	Injuries
297	Norway House	2	$ 203,000	-	-
298	South Indian Lake	1	25,000	1	-
299	Wabowden	2	33,500	1	-
300	Miscellaneous	51	778,781	-	-
304	Harwill	5	-	-	-
315	West Region Tribal Council	3	10,000	-	-
316	Interlake Reserves Tribal Council	21	163,200	1	-
317	South East Resources Development Council	21	2,200	-	-
318	Island Lake Tribal Council	2	-	2	-
319	Keewatin Tribal Council	56	318,800	1	-
320	Miscellaneous Reserves	15	85,000	-	-
321	Swampy Cree Tribal Council	10	132,917	-	-
Total		**5,762**	**$ 55,647,672**	**22**	**256**

Table No. 16
Fire Losses Exceeding $500,000., 1989

Date	Location	Occupancy	Cause	Amount
89 01 05	Giroux, R.M. of Ste. Anne	Industrial Manufacturing	Undetermined-accidental	$ 650,000*
89 04 14	Winnipeg	Hydro Sub Station	Electrical	500,000*
89 04 15	St. Francois Xavier	Industrial Manufacturing	Undetermined-suspicious	581,640*
89 07 22	Winkler	Industrial Manufacturing	Electrical	1,850,000*
89 07 23	Winnipeg	Industrial Manufacturing	Incendiary	755,000*
89 08 19	Thompson	Outdoor Property	Incendiary	1,441,869*
89 11 08	Winnipeg	School	Incendiary	2,000,000*
89 11 12	Winnipeg	Restaurant	Undetermined-accidental	600,000*
89 11 15	Winnipeg	Industrial Manufacturing	Electrical	500,000*
89 12 05	R.M. of Hanover	Barn	Electrical	642,625*
89 12 25	R.M. of Stanley	Barn	Undetermined-accidental	550,000*

**Estimated Loss*

Section II - Investigation

Table No. 17
Investigations Conducted Under The Fires Prevention Act, 1989

Area	Number
Fire Commissioner's Staff*	389
Winnipeg Police Force	172
Urban Police Forces	49
R.C.M.P.	298
Total	**908**

* *In co-operation with local police*

Table No. 18
Findings of Investigations Conducted Under The Fires Prevention Act, 1989

Cause	Number
Accidental	440
Incendiary	175
Vandalism	37
Undetermined - accidental	212
- suspicious	40
Still Under Investigation	4
Total	**908**

Section III - Manitoba Fire Chiefs

List of Fire Chiefs and Fire Departments 1989

Alexander	W.J. Dane
Alonsa	Stan Fashoway
Altona	Bob Stoesz
Amaranth	Joseph Smith
Angusville	Lynn Chuchmuch
Arborg-Bifrost	George Chyzy
Arden	Dennis Gagnon
Ashern	Matt Baker
Austin	Donald Currie
Baldur-Argyle	William Warrener
Barrows	Leon Genaille
Beausejour	Alvin Klapprat
Belmont	Edward Verhelst
Benito	Ken Schenk
Berens River	Rolly Dubien
Big Black River	Raymond Valiquette
Binscarth	Victor Cozens
Birch River	Floyd Corbett
Birtle	Gerald Birch
Bissett	Alden Wood
Boissevain	Eric Reichart
Bowsman	Ken Fahrenschon
Brandon	Ed Polnick
Brochet	Roderick Thomas
Camperville	Arnold Guiboche
Carberry-N. Cypress	R. Alvin Walker
Cardale	Vernon Darroch
Carman-Dufferin	Brian Milne
Cartier, R.M.	Roger Gillis
Cartwright-Roblin	Wm. G. Waldie
Churchill	Dick Hunter
Cormorant	Neil Myers
Cranberry Portage	Walter Queen
Crane River	John Fleury
Cross Lake	Darlene Beck
Crystal City	William McKitrick
Cypress River	Rene D. Aubry
Dallas/Red Rose	Ralph Oleski
Darlingford	Bob Davidson
Dauphin	Dave Seeley
Dauphin River	Erle Einarsson
Deloraine	William Cheyne
Dominion City	Barry Gushuliak
Duck Bay	Harold Delaronde
Dunrea	Yves Descottes
East St. Paul	Ernest Ottenbreit
East Selkirk	Clive Rennie
Easterville	Don Martin
Eddystone	Kelly Johnson
Elm Creek	Kermit Olson
Emerson	Stan Machdanz
Erickson	Ken Podruski
Eriksdale	Harry Granburg
Ethelbert	Mike Machnicki
Fisher Bay	Michael Whiteway
Fisher Branch	John Plett
Flin Flon	Reuban Hagen
Fork River	Bob Sime
Foxwarren	Don Hodgson
Fraserwood	Steve Maksymyk
Gilbert Plains	Len Pratt
Gillam	Glen King
Gimli	Ray Sisk
Gladstone	Lyle Cox
Glenboro	Steve Bjornson
Glenella	Fred Lazor
Gods Lake Narrows	Raymond Trout
Grand Marais	Art Carriere
Grand Rapids	Greg King
Grandview	John Yarush
Granville Lake	George MacKenzie

List of Fire Chiefs and Fire Departments 1989(continued)

Gretna	Vern Schroeder
Grunthal	Abe Friesen
Gypsumville	Murray L. Jackson
Hamiota	Barrie Lee
Hartney	R.A. McKenzie
Harwill	Lorne Webb
Haywood	Gilbert Pineau
Herb Lake Landing	Jim Corman
Holland	Ron Landerville
Homebrook	Ruth Zahorodney
Ilford	Edward Shoup
Inglis	Gerald Gorda
Inwood	Ralph Hazelton
Island Lake	Len Chotnaby
Kelwood	Duane Stewart
Kenton	Ivan Crampain
Killarney	C.E. Hartwell
Kleefeld	Abe Martens
La Broquerie	Gilbert Tetrault
Lac du Bonnet	Lloyd Howe
Leaf Rapids	Edward Kozy
Letellier-St. Joseph	Marcel Bissonnette
Lorette	Marcel Johnson
Lorne, R.M.	Peter Sheffield
Lowe Farm	Larry Gluck
Lundar	Scott Ward
Lynn Lake	Wayne Doak
MacDonald, R.M.	Alvin Murner
MacGregor	Gene Hyde
Mafeking	Melvin Plett
Manigotogan	Charles Simard
Manitou	Frank Gerbrandt
Matheson Island	Donald Ladouceur
McAuley	Glendon K. Patterson
McCreary	William Roncin
Meadow Portage	Richard Farand
Melita	Robert Reddaway
Miami	Larry Mansell
Miniota	S.W. Dales
Minitonas	Douglas E. Wagner
Minnedosa	Bill McVey
Moose Lake	Steve Campbell
Moosehorn	Richard Shannon
Morden	Percy Paracholski
Morris	Bill Harder
National Mills	Wilfred Quill
Neepawa	Don Evenson
Nelson House	Wayne Spence
Newdale	Don Baker
Ninette	Bob Mason
Niverville	George Dyck
Norway House	Erwin McLeod
Notre Dame de Lourdes	Yves Julien
Oak Lake	Reg Morcombe
Oak River	Vernon Darroch
Oakbank	John Murrell
Oakburn	Graydon Bell
Ochre River	Wayne MacMillan
Onanole & District	Dwight McMillan
Pelican Rapids	Albert Campeau
Pierson	Harvey Campbell
Pikwitonei	Leon Brightnose
Pilot Mound	K.L. Heppner
Pinawa	N. Peter Cliche
Pine Falls	Wilfred Kemball
Pine River	Claude Adams
Piney	Dale Edbom
Plumas	Ron Curtis
Plum Coulee	Dennis Wiebe
Pointe du Bois	Gordon Johnson

List of Fire Chiefs and Fire Departments 1989(continued)

Portage la Prairie	Albert R. McDonald
Rapid City	Chris Wells
Red Deer Lake	Faron Cook
Reston	William Busby
Richer	Paul Saindon
Rivers	Glen Maguire
Riverton	Raymond Johnson
Roblin	Tom Bowley
Roland	Greg VanWyck
Rorketon	Leo Hrushrowy
Rosedale, R.M.	Harry Smithson
Rosenort	Frank Plett
Rossburn	Larry Sidoryk
Rosser	Howard Manchulenko
Russell	Henry Smith
St. Adolphe	Vic Braun
St. Andrews, R.M.	Edwin Carter
St. Claude	Gilbert Pineau
St. Francois Xavier	George Dayton
St. Jean Baptiste	Norbert Sabourin
St. Laurent	Ed Schon
St. Lazare	Harry Jessop
St. Malo	Dennis Maynard
St. Pierre-Jolys	R. Hebert
Ste. Anne	Maurice Chaput
Ste. Rose du Lac	William Ryder
Sandy Lake	Les Lewandoski
Selkirk	Ted Wozny
Seymourville	Ted Seymour
Sherridon	Debbie Hatch
Shoal Lake	Graydon Bell
Sifton	Martin Gancher
Snow Flake	Bill Giesbrecht
Snow Lake	David Syms
Somerset	Luc Boulet
Souris	Donald Doherty
South Indian Lake	Steve Ducharme
South Norfolk, R.M.	Brian Charrett
Sperling	Wendell J. Fewster
Sprague	Stan Meek
Steinbach	Ert Peters
Stonewall-Rockwood	Dennis Fright
Stony Mountain-Rockwood	Robert Smith
Strathclair	Brian Martin
Swan River	Lorne Halliday
Teulon-Rockwood	Jack Palen
The Pas	Ron Bourquin
Thicket Portage	Alvin Brightnose
Thompson	L. Carkener
Treherne	John Jenkinson
Victoria Beach	Robert L. Jonsson
Vita	Jerry Lubiansky
Wabowden	Mel Johnson
Wallace and District	Bill Edmonds
Warren-Woodlands	Al Jones
Wasagaming	Pat Rousseau
Waskada	Kenneth L. Austin
Waterhen	Allan McCreery
Wawanesa	Mel Roney
West St. Paul	Noel Cheguis
Whitemouth, R.M.	Paul Thomson
Whitewater, R.M.	Grant Maguire
Winkler	Abe H. Suderman
Winnipeg	Jack Henderson
Winnipeg Beach	Jerry Hykawy
Winnipegosis	C. Bergen